

*REMARKS/ARGUMENTS*

In response to the Office Action mailed July 29, 2009, Applicants amend their application and request reconsideration. In this Amendment claims 13 and 14 are cancelled. No new claims are added so that claims 1-12 and 15-27 are now pending.

*This Amendment*

The Office Action includes a bewildering and internally inconsistent statement of the status of the claims of this patent application. For example, the PTOL-326 form indicates that claims 15-27 are allowed, that claims 1-3, 5, 26 and 27 are rejected, and that claims 14 and 6-14 are only objected to. The body of the Office Action states that claims 4 and 6-27 would be allowable if rewritten in independent form and amended to overcome rejections based upon 35 USC 112, second paragraph. However, the Office Action states that claims 1-27 were rejected pursuant to 35 USC 112, first paragraph and the specification was objected to on the same basis.

Applicants' representative has attempted to determine the intent of the comments of the Office Action to place the claims in form for allowance. Each of the points in the Office Action is responded to here. It appears that the relatively complex patent application, at least in terms of the number of disclosed embodiments, has not been fully comprehended so that a painstaking effort has been made to conform the claims to the disclosure in responding to the spirit of each of the remarks of the Office Action.

In view of the amendments made here, claims 13 and 14 are cancelled as potential duplicates of independent claims 24 and 25. The cancellation does not cede any claim scope. For example, although there are strong similarities between independent claim 15 and dependent claim 4, there is not a duplication that would require cancellation of either claim. Further, there is a somewhat close relationship between dependent claim 5, as amended, and independent claims 26 and 27. However, there is no duplication.

*The Invention*

The invention concerns a guiding system for guiding a vehicle along a guiding rail. The rail has a rolling surface, which is generally considered the upper or top surface of the rail, and at least one side surface that is generally transverse to the rolling surface. It is important to recognize what is claimed and what is not claimed as the invention. The invention does not claim the vehicle that is guided by or includes the guiding system. The vehicle may be, as described in the patent application, a streetcar, but there is no limitation with respect to the vehicle. The vehicle may be a truck carrying a relatively heavy load. However, the load is not borne by the guiding system. Rather, the guiding system is directed to turning the steering wheels that support the vehicle. See the embodiments illustrated in Figures 1 and 11 of the patent application. The tires 12 in those figures are part of the vehicle that is being guided and it is those tires that carry the load of the vehicle. The load of the vehicle is not carried by the guiding system that, in those two depicted embodiments, includes three rollers. Thus, the objective of the invention is to provide a relatively sensitive guiding system that follows the path, including turns, established by the guiding rail.

It is apparent, by considering Figures 1 and 11 of the patent application, that the guiding system may include, as shown in those two embodiments, three rollers. Those particular embodiments illustrate a central roller rolling on the rolling surface of the rail and two inclined side rollers that respectively roll on the two opposite side surfaces of the rail. It is not necessary that both of those side rollers be always in contact with the side surfaces of the rail. See the embodiments of Figures 2 and 4-8. In some described embodiments there is constant contact between two side rollers and the two side surfaces of the rail. See the embodiments of Figures 10, 13, 15, 16, and 17.

It is also important to recognize that not all of the described embodiments include three rollers. That disclosure may have been overlooked in the examination. See, for example, the embodiments of the invention illustrated in and described with

respect to Figures 16 and 17, at page 13 of the patent application as filed. Those embodiments are encompassed by claims 24 and 25, which replace cancelled claims 13 and 14, and have no central roller, only two complex inclined rollers. Each of those rollers includes an external part and an internal part respectively contacting the side and rolling surfaces of the rail. In fact, in view of the complexity of the rollers employed at least in those embodiments, it is accurate to refer to those roller structures as guiding parts so that the claims encompass all of the described embodiments.

### *The Office Action*

Formality Rejections and Responses. For simplicity, the points of the Office Action are taken up in the order in which they appear in the Office Action. Related issues are discussed together. In the first of those issues, the drawings were objected to as not showing “the side parts and rolling part of claim 15.” In addition, the specification was objected to as failing to provide proper antecedent basis, apparently with respect to claim 15 and its dependent claims. According to the Office Action, “Applicant only discloses side rollers and a central roller,” whereas, the claims mention a rolling part and side parts. The Examiner took the view that these elements are all the same and must, therefore, be identified with identical words.

There is no need to supply any amended drawing and there is proper antecedent basis for every term in every pending claim in the patent application as filed. Further, the claims have been amended to make certain that when the rolling part and side part comprise central and side rollers, that relationship is made clearer. These revisions might have been made in response to the first Office Action, except that no similar objections were raised in that Office Action.

As already explained, while, in some embodiments, a central roller and two side rollers are present, not every embodiment is so constructed. Thus, the claims, such as the broadest independent claims, are drafted to encompass as many described embodiments as possible. It is apparent, for example, that in the embodiments of Figures 16 and 17, the relatively complex rolling parts each include a part (the internal

part) that contacts the rolling surface of the rail and another part (the external part) that contacts the side surface of the rail. This arrangement achieves a desired synchronization of the rotational speeds of the points of contact, as expressly described in the patent application. The word “part” with respect to the rolling elements is entirely descriptive and supported by the disclosure of the patent application. One of skill in the art understands the use of this more generic term “part” as opposed to the more specific term “roller.” Moreover, there is no requirement in U.S. practice of verbatim agreement between claim terms and the specification of a patent application.

Here, the requirements of 35 USC 112, first paragraph, are met because the person of skill in the art, reading the disclosure as well as the claims, and studying the drawings, can easily understand the terms employed. Therefore, the objection to the specification is incorrect and no drawing amendment is necessary. Accordingly, the objection should be, upon reconsideration, withdrawn.

Claims 1-27 were rejected pursuant to 35 USC 112, first paragraph, as failing to meet the enablement requirement. This rejection seems to be founded upon an apparent failure to comprehend the disclosure of the patent application and the subject matter claimed. According to pages 3 and 4 of the Office Action:

“There is no description in the specification or drawings in the original disclosure that explains how one of ordinary skill in the art would be able to guide an extremely heavy vehicle through mere ‘pin-point’ conduct [sic], and thus undue experimentation would be required by the ordinarily skilled artisan to try and accomplish this feat [sic] which would seem difficult if not impossible from an engineering standpoint. The operation of the device is further clouded by the fact that applicant’s arguments in response to the last Office action appear to stress this as the defining feature of the applied prior art. Additionally[,] while applicant’s specification and claims call for this ‘pin-point’ contact, the drawings appear to show a significant percent of contact (see figure 2). There is no definition or percentage of contact that defines what applicant intends

as 'pin-point', and since this is the supposed patentable feature, one of ordinary skill in the art is left to guess how much contact would be considered 'pin-point'."

The foregoing commentary is supplemented by a similar rejection, pursuant to the second paragraph of 35 USC 112, that does not merit reproduction here. The Examiner, in those remarks, asserted that there is a conflict in the disclosure and figures with regard to the term "pin-point." These rejections are respectfully traversed because they are not consistent with the disclosure of the patent application and are illogical when that disclosure is considered in combination with fundamental knowledge in the mechanical arts.

The present patent application was filed in French and, subsequently, an English language translation prepared by a professional translator was filed. The important phrase in claim 1 describes the contact as "soit en contact ponctuel avec le rail." The French word "ponctuel" means "point" as shown by the attached page 274 from the French-English volume of *Comprehensive English Dictionary of Engineering and Technology* (1982). In this Amendment, the claims are revised and refer to this point contact, rather than to "pin-point" contact, to conform to the dictionary definition of the original term, "ponctuel."

Point contact means that the contact between the side part/side roller and the side surface of the rail occurs at a point, i.e., an area that is essentially dimensionless in two orthogonal directions. The term "point" has this well understood meaning mathematically and in the mechanical arts. Further, this contact is clearly described in paragraph [0043] of the patent application as filed in both French and English. As explained there, the point contact is achieved by contact between an outermost part of a convex annular surface on the side roller/side part and the side surfaces of the rail. By using this arrangement, the area of contact between these elements is minimized to minimize the friction between these two elements. This arrangement and objective are expressly described in the cited paragraph of the patent application.

Claim 5 and other claims are amended here, consistent with that disclosure, to describe the convex annular surface that achieves the point contact as the side part/roller rotates and moves relative to the rail. Of course, as the side part/side roller rotates about its rotational axis, the particular point on that convex annular surface that contacts the side surface of the rail changes. Thus, the amended claims expressly state that the point contact is present one point at a time. Different points form the point contact as the side part/side rollers rotate. Nevertheless, the contact, at any given time, is minimized in area to achieve minimal friction.

It is beyond reasonable argument that one of skill in the art, reading the patent application and observing the convex annular surface, can reproduce that surface and the point contact between the side part/side roller and the side surface of the rail. Thus, the invention is enabled. That person would never interpret the drawings as the Examiner has, particularly when the disclosure, i.e., specification and drawings, is considered as a unit.

The statement that a person of ordinary skill in the art would not know how to and could not guide an extremely heavy vehicle employing the invention misapprehends the disclosure of the patent application. The weight of the heavy vehicle is carried by the tires or other wheels of the vehicle, not by the guiding system. The guiding system, which is the subject matter claimed, and which involves the point contact between two mechanical elements, does not bear the weight of the vehicle or the load in the vehicle. There is no sound engineering reason why the steering and guiding mechanism of the vehicle is affected by the weight of the vehicle or its load, particularly after even a cursory review of Figures 1 and 11 of the patent application. Again, the argument to the contrary appearing at pages 3 and 4 of Office Action is not reasonable, not logical, nor based on any description of the patent application. Therefore, the rejection cannot properly be maintained.

The extensive commentary regarding disclosure of dimensions that correspond to the “area” of a point contact fails to acknowledge the fundamental definition of

“point” as used in mathematical and mechanical arts. Points are only one-dimensional and do not have areas.

Finally, the reference to a “belaying pin,” an element of Saturday morning pirate movies for delighting children, has no reasonable or proper place in this examination. The invention does not concern a ship. Likewise, the Examiner’s comments on the claims *vis-à-vis* a determination of infringement, are unhelpful and inappropriate. Claim infringement is an issue never presented to the U.S. Patent and Trademark Office for determination. Therefore, those comments go well beyond the question of whether the claims are supported by the patent application as filed and whether those claims are definite. Those comments should be withdrawn.

The second leg of the rejection pursuant to 35 USC 112, second paragraph, regarding “side parts” and “side rollers” has already been responded to above.

As best understood from the Office Action, the clarifying amendments of the claims made here, the explanation as to why no drawing amendment is required, and the foregoing response to the rejections pursuant to 35 USC 112, first and second paragraphs, will result in the allowance of claims 15-27 and a declaration that claims 4 and 6-12 are at least allowable.

Prior Art Rejections and Responses. Independent claims 1, 26, and 27, as well as dependent claims 2, 3, and 5, were rejected as unpatentable over Andre et al. (U.S. Patent 7,228,803, hereinafter Andre) in view of Jensen (U.S. Patent 6,523,480). This rejection is respectfully traversed, particularly as to the claims now pending.

As an initial point, the rejection of claims 26 and 27 as obvious over Andre in view of Jensen, as stated at page 5 of the Office Action, is inconsistent with the statement at page 7 of the Office Action that those two claims would be allowable if the issues pursuant to 35 USC 112 were resolved. The allusion to claims 26 and 27 at the first line of page 7 of the Office Action does not provide sufficient basis for determining the grounds of rejection of those two independent claims. Nevertheless, because of the similarity of the language in the common parts of claims 1, 26, and 27, regarding the point contact between the side part/side roller and the side surface of the

rail, all formerly rejected claims are clearly patentable over the asserted combination of Andre and Jensen. This conclusion is particularly apparent from the amended claims which more clearly describe that contact as being only at a point.

Andre describes a guiding assembly employing a guide rail and what might be considered two side rollers, each of which contacts a respective oblique surface at the upper side of the rail. That contact is certainly not a point contact. Those side rollers also include projecting peripheral edges 27 on the "rail side" of plates 26. As those angled guide wheels 1 and 2 move laterally in the course of motion of the guided vehicle along the guide rail, one or the other of the peripheral edges may come into contact with the guide rail, as illustrated in Figures 3 and 5 of Andre. There is no possibility that this kind of contact can be considered point contact, contrary to the presumption of the prior art rejection. The contrary conclusion was reached by applying an incorrect definition of the term "point contact." The definition used is contrary to the disclosure of the patent application, common knowledge, and the clarified claim language presented here. That definition, i.e., "less than significantly complete contact," makes no sense in the context of Andre, the invention, or the art.

In addition, Andre makes entirely clear that the contact described must be far more than a point contact. Contact between surfaces over an area is required in Andre to achieve the important function of the Andre structure. As illustrated in Figure 3 of Andre, in order to protect the soft covering 28 on part of the guide wheel, when the peripheral edge 27 comes in contact with the side surface of the guide rail, the covering 28 is lifted out of contact with the guide rail. This result is achieved by ensuring relatively large area contacts, certainly not a point contact, between that peripheral edge 27 and the side surface of the guide rail. See the description in Andre from column 3, line 49 through column 4, line 3.

As described previously, Jensen concerns a dual mode vehicle that travels on land or on a monorail. There is no description in Jensen of any structure that could provide the kind of point contact that is described in the claims presented here. Moreover, the Office Action does not make any assertion that Jensen does describe



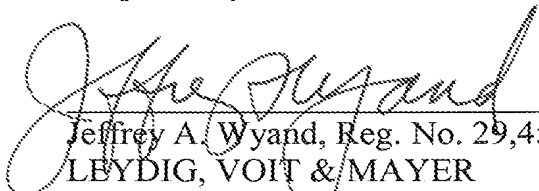
such a point contact. Rather, Jensen was cited for other features, namely a roller, i.e., tire, 14 and a surface 15 contacted by the tire. Thus, the hypothetical modification of Andre with Jensen still cannot suggest to one of skill in the art the structure of the rejected claims 1-3, 5, 26, and 27, at least with respect to the point contact of the side part/side roller and the side surface of the guiding rail. A demonstration of *prima facie* obviousness requires that at least the elements of the claimed invention be shown as present in the prior art. Andre and Jensen fail that fundamental requirement. Upon reconsideration, the prior art rejection of those claims should be withdrawn.

In addition, with respect to dependent claims 7, 26, and 27, neither Andre nor Jensen shows a side part/side roller having a convex profile in a radial section as described in those claims. Since the section described as radial, the convex profile is, as described in the patent application, annular. No annular convex projections are found on the guiding wheels of Andres or Jensen. Thus, on this additional ground, those claims 7, 26, and 27 are patentable, without regard to the point contact feature of those claims, which has already been discussed.

### Conclusion

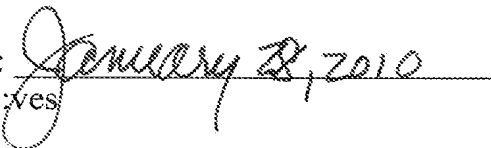
All claims pending are definite, supported by the patent application as filed, and distinguish from the prior art. Therefore, claims 1-12 and 15-27 should now be allowed.

Respectfully submitted,

  
Jeffrey A. Wyand, Reg. No. 29,458  
LEYDIG, VOIT & MAYER  
700 Thirteenth Street, N.W., Suite 300  
Washington, DC 20005-3960  
(202) 737-6770 (telephone)  
(202) 737-6776 (facsimile)

Date:

JAW:ves



DR.-ING. RICHARD ERNST

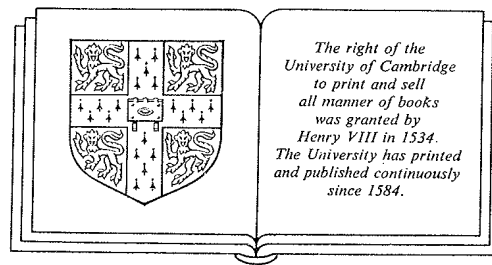
E

COMPREHENSIVE DICTIONARY  
OF  
ENGINEERING AND TECHNOLOGY

with extensive treatment of the most modern techniques and processes

VOLUME 1

FRENCH-ENGLISH



E

CAMBRIDGE UNIVERSITY PRESS · CAMBRIDGE  
LONDON · NEW YORK · NEW ROCHELLE · MELBOURNE  
SYDNEY

---

OSCAR BRANDSTETTER VERLAG · WIESBADEN

British Library Cataloguing in Publication Data

Ernst, Richard

Comprehensive dictionary of engineering  
and technology

Vol. 1: French-English

1. Technology—Dictionaries—French

2. French language—Dictionaries—English

I. Title

603'.41 T10

ISBN 0 521 30377 X

Conformément à l'usage général pour les ouvrages de référence, nous avons renoncé à toute mention des brevets, modèles déposés et marques de fabrique. L'absence d'une telle indication ne signifie donc pas que le produit ou terme mentionné ne soit pas protégé.

In this dictionary, as in reference works in general, no mention is made of patents, trademark rights, or other proprietary rights which may attach to certain words or entries. The absence of such mention, however, in no way implies that the words or entries in question are exempt from such rights.

La propriété littéraire de cet ouvrage est protégée. Les droits en découlant sont réservés, particulièrement ceux de traduction, de reproduction, d'émission par radio, de restitution par des systèmes photomécaniques ou tous autres, y compris la mise en mémoire dans des installations de traitement des données, également dans le cas d'une utilisation partielle ou par extraits.

All rights reserved. No part of this book may be translated, stored in information retrieval systems, or transmitted, in any form or by any means – electronic, mechanical, photocopying, recording, or otherwise – without the prior written permission of the publishers.

Published by the Press Syndicate of the University of Cambridge  
The Pitt Building, Trumpington Street, Cambridge CB2 1LP  
32 East 57th Street, New York, NY 10022, USA  
10 Stanford Road, Oakleigh, Melbourne 3166, Australia

© 1982 by Oscar Brandstetter Verlag GmbH & Co. KG, Wiesbaden

First published by Cambridge University Press 1985

Printed in Germany

Library of Congress catalogue card number: 84-72209

kinetic vacuum pump || ~ à **diaphragme** ou à **membrane** / diaphragm vacuum pump || ~ **éjecteur** / ejector vacuum pump || ~ **intermédiaire** / booster vacuum pump || ~ de **maintien** / holding vacuum pump || ~ à **mercure** / mercury vacuum pump || ~ à **palette** / slide vane rotary vacuum pump || ~ à **piston alternatif** / piston vacuum pump || ~ à **piston oscillant** / rotary plunger vacuum pump || ~ à **piston tournant** / rotary piston vacuum pump || ~ **poussé** / high vacuum pump || ~ **préliminaire** / backing pump, fore-pump || ~ à **vapeur d'eau** (vide) / vapour pump || ~ **volumétrique** / positive displacement vacuum pump

**pompe** *f* à **vis** / propeller pump || ~ à **vis à grande capacité** / large type screw pump || ~ **volumétrique** / positive displacement pump || ~ **volumétrique**, **pompe** *f* de dosage / proportioning o. dosing pump, metering pump || ~ **volumétrique de Roots** / Roots [blower] pump, Roots vacuum booster, Roots rotary positive booster

**pompe** par **éclair** (laser) / flashlamp-pumped

**pompiers** *m* / fireman || ~ *s m pl* / fire company o. department (US), fire brigade (GB)

**ponpiste** *m* / filling station attendant

**ponçage** *m* (men) / sanding || ~ de  **finition** (bois) / finish sanding || ~ par **ponceuse vibrante** / vibratory grinding || ~ à **sec** (bois) / dry grinding

**ponce** *f* (gélol) / pumice [stone] || ~ de **laitier** / foamed slag, pumice slag || ~ de **laitier de haut fourneau** / blast furnace foamed slag o. pumice-stone slag

**ponceau** *adj* (invariable) / ponceau *adj* || ~ *m* (teint) / ponceau || ~ **3 R** (teint) / ponceau **3 R** || ~ (bâtim) / underdrain || ~ (routes) / culvert || ~ (ch. de fer) / culvert || ~ en **cascade** ou en **gradins** / cascade culvert || ~ avec **dalle** / slab culvert || ~ avec **dalle accouplée** / twin slab culvert || ~ en **gradins** / cascade culvert || ~ **latéral** / side culvert || ~ **tubulaire** (routes) / pipe culvert

**poncer** / pumice *vt*, rub with pumice stone || ~ (galv) / grind || ~ (bois) / sand *vt* || ~ (tan) / fluff *vt* (leather on the flesh side) || ~ par **bande abrasive** / grind on the abrasive belt || ~ le **bois à travers [la fibre]** / grind across the grain || ~ d'**épaisseur** (bois) / thickness-grind || ~ au **papier de verre** (bois) / sand *vt* || ~ le **plancher** / surface floors *vt*

**ponceur** *m* (personne) / sander

**ponceuse** *f* (bois) / sanding machine || ~ à **bande** (bois) / belt sanding machine || ~ à **bande portative** / hand band sander || ~ pour **bâtons ronds** (bois) / round stock centerless sanding machine || ~ pour **chants, feuillures, et profils** (bois) / edge and rebate and profile sanding machine || ~ à **courroie** / strap sanding machine || ~ à **cylindres** (bois) / cylinder sanding machine || ~ à **disque** (bois) / disk sanding machine || ~ de **feuillures** (bois) / rebate sanding machine || ~ **orbitale** (m.outils) / orbital sander || ~ au **papier de verre** / sander, sanding machine || ~ à **patin oscillant** (bois) / sanding machine with oscillating action, vibrating grinder || ~ **polisseuse** / à **bande** (bois) / belt sanding and polishing machine || ~ du **sol** / floor grinder || ~ **vibrante** / vibrating grinder [attachement], pad sander (US) || ~ **vibrante adaptable** (m.outils) / orbital sanding attachment

**ponceux** / pumiceous

**poncif** *m* (fonderie) / parting powder

**poncis** *m* (fonderie) / dust bag

**punctuation** *f* (typo) / punctuation

**punctué** (dessin) / stippled

**punctuel**, **régulier** / punctual, prompt || ~ (trafic) / on schedule || ~ (contact) / localized || ~ (comme un

point) / punctual, punctiform, point...

**punctuer** / dot *vt***pond** *m* (pétrole) / pond**pondérabilité** *f* / ponderability**pondérable** / ponderable**pondéral** / gravimetric, by weight**pondération** *f* / ponderation || ~ (statistique) /weighting || ~ des **bruits** / noise rating o. weighting|| ~ des **tâches** (ordonn) / job factor weighting**pondéré** (statistique) / weighted**pondérer** (statistique) / weight *vt* || ~ (gén) / weight**pondéreux** (phys. méc) / weighty, ponderous**pondéromoteur** (phys) / ponderomotive**pongé[e]** *m* / China silk, pongee**ponor** *m* (géol) / sinkhole, swallowhole, katavothre, ponor**pont** *m* / bridge || ~ (électr) / bridge, balance || ~ (nav) /

deck || ~ (verre) / bird cage o. swing || ~ (lunettes) /

nose saddle o. piece || ~ (montre) / bridge, bar, cock ||

~ **A** (nav) / A-deck || ~ à **bascule** *m* / bascule o.balance bridge || ~ **abri** (nav) / awning o. shelterdeck || ~ **abri** *m* (funi) / guard bridge, protectionbridge || ~ **aérien** / air-lift || ~ **ajustable** (ch. de fer) /loading ramp || ~ d'**alimentation** (télécom) / feedingbridge || ~ à **âme pleine** à **tablier supérieur**, [inférieur] / plate deck bridge, [trough bridge] || ~d'**ancrage** (montre) / pallet cock || ~ **aqueduc** *m* /

bridge canal, aqueduct carrying a canal, canal

bridge || ~ **AR type banjo** (auto) / banjo axle || ~ en**arc** ou **arqué** ou en **arches** / arch[ed] bridge || ~ en**arc** en **treillis** / arch truss bridge || ~ à **armatures** et**contrefiches** / strut and truss-framed bridge || ~**arrière** (nav) / quarterdeck, quarter-deck || ~**arrière**, pont *m* **AR** (auto) / rear axle stay o. casing ||~ d'**arrosage** (raffinerie) / shower deck || ~d'**attelage** (pétrole) / racking platform, monkeyboard || ~ d'**atterrissage** (aéro) / flight deck (US),landing deck || ~ **au-dessus des terrains**d'**inondations** / inundation o. flood bridge || ~ enforme d'**auge** / open o. trough bridge || ~ **auxiliaire**/ provisional o. temporary bridge || ~ **avant** (nav) /foredeck || ~ d'**azote** / nitrogen bridge || ~ **Bailey** /

Bailey bridging equipment o. bridge || ~ de

**balancier** (montre) / balance bridge || ~ **banjo** (auto) /banjo axle || ~ de la **barge de forage** / jacket ofdrilling barge || ~ de **barrillet** (montre) / barrelbridge || ~ **basculant** / flap bridge || ~ **basculant et****roulant** / rolling lift bridge || ~ **bascule** *m* /platform balance o. scales *pl*, weighbridge, patentweighing machine, patent scale beam || ~ **bascule***m* en **sol** / flush-mounted platform balance ||~ **bascule** *m* à **véhicules routiers** / road vehicleweighing equipment o. machine || ~ **bascule** *m* à**wagons** / waggon weigh-bridge || ~ à **béquilles**(routes) / rigid frame bridge || ~ en **béton** / concretebridge || ~ **biais** / askew bridge || ~ **bow-string** /

tension bridge, bridge hanging on bent beams,

bridge on the bow-string principle || ~ à **câbles****inclinés** ou **diagonaux** / guyed o. cable-stayedbridge, bridle chord bridge || ~ à **câbles inclinés** en**béton précontraint** / prestressed-concreteinclined cable bridge || ~ en forme de **caisson** / boxgirder bridge || ~ **canal** *m* (routes) / tubular bridge ||~ **cantilever** / cantilever bridge || ~ **cantilever****type Gerber** / Gerber type cantilever bridge || ~ de**capacités** / capacitance bridge, capacitancechecker || ~ de **chargement** / loading o. handlingplatform o. stage || ~ de **chargement de minerais** /ore loading bridge || ~ **chargeur** (sidér) / chargingcrane || ~ **chargeur** *m* d'**auges** (sidér) / charging boxhandling crane || ~ **chargeur d'augets à ferrailles**